MINI ARCAS

2441

EstesRockets.com

AGES 10+

Skill Level

ADVANCED

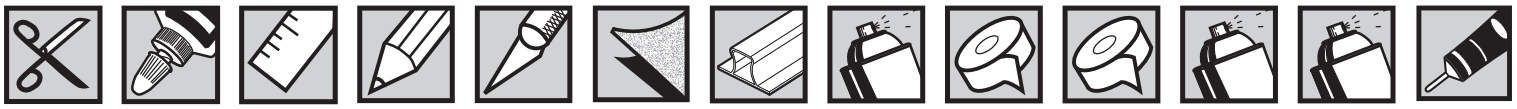
MODEL ROCKET INSTRUCTIONS

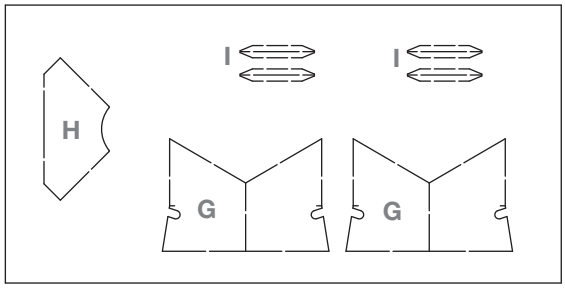
KEEP FOR FUTURE REFERENCE

IMPORTANT: Please record date found on decal and keep for future reference. _____

READ ALL INSTRUCTIONS. *Make sure you have all parts and supplies. Test fit all parts before applying glue. Refer to your glue manufacturer's dry times during build.*

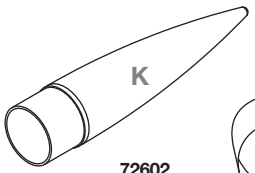
SUPPLIES



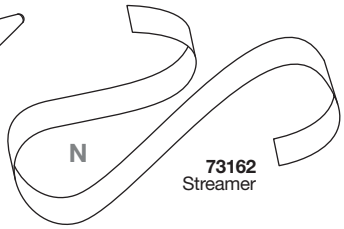


090051-2441
Last cut balsa

72603
Nose cone pin

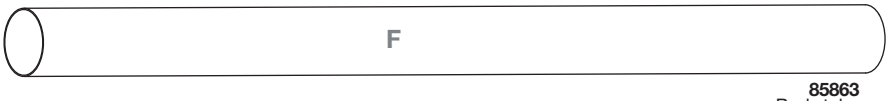


72602
Plastic nose cone



73162
Streamer

038176 Launch lug **x2**

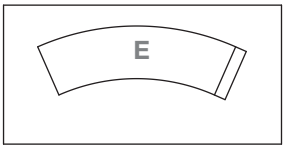


85863
Body tube

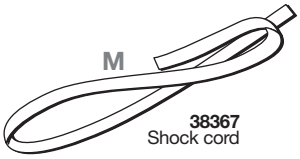
030222-4
Yellow engine block

30162-2
Green ring **x2**

31787
Engine tube



090057-2441
Printed index stock



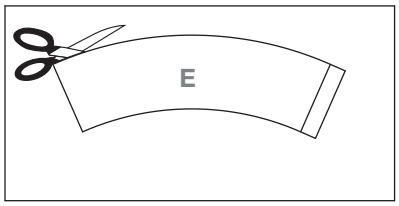
38367
Shock cord

090001-2441
Waterslide decal

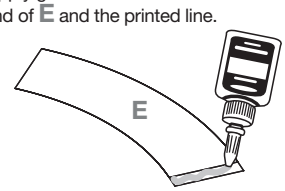
35002
Yellow spacer tube

PREPARE TAIL CONE

1. Using scissors, cut out **E**.



2. Apply glue to **E** between the end of **E** and the printed line.



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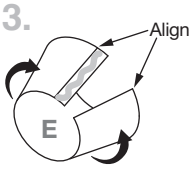

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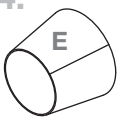
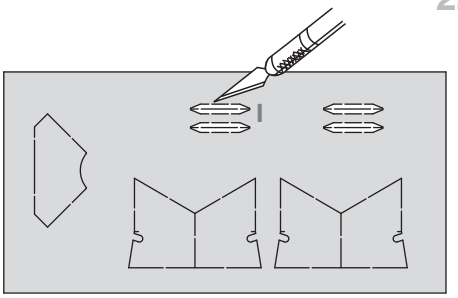


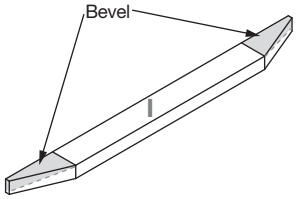
LET DRY

PREPARE FIN DETAIL

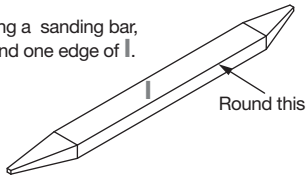


1. Using a hobby knife, cut out all eight **I** pieces.

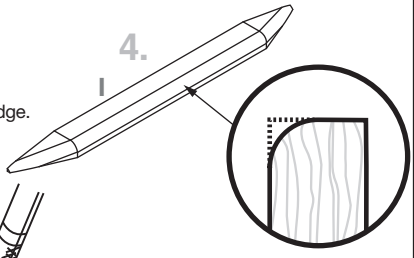
2. Using a small sanding bar, bevel both ends **I**.



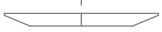
3. Using a sanding bar, round one edge of **I**.



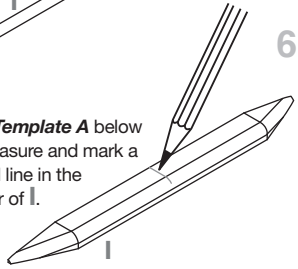
4.



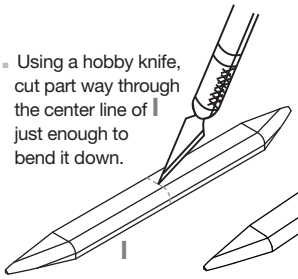
5. Use ***Template A*** below to measure and mark a pencil line in the center of **I**.



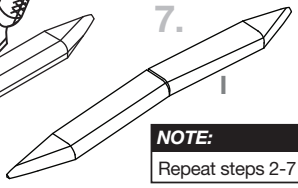
Template A.



6. Using a hobby knife, cut part way through the center line of **I** just enough to bend it down.



7.

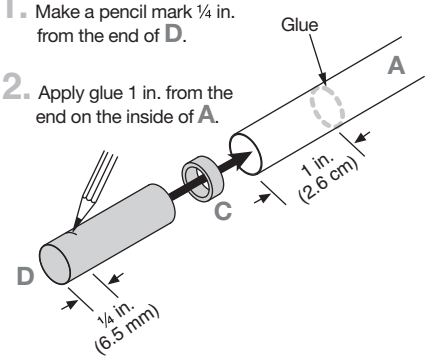


NOTE:
Repeat steps 2-7 for all **I** pieces.

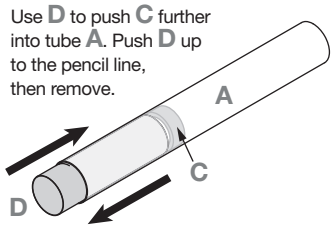
ASSEMBLE ENGINE MOUNT

1. Make a pencil mark ¼ in. from the end of **D**.

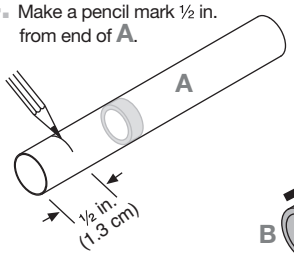
2. Apply glue 1 in. from the end on the inside of **A**.



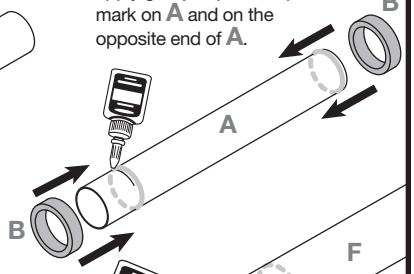
3. Insert **C** into the end of **A**. Use **D** to push **C** further into tube **A**. Push **D** up to the pencil line, then remove.



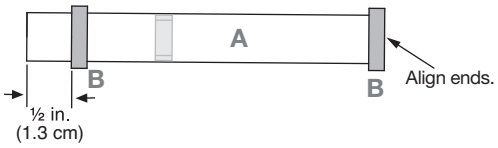
4. Make a pencil mark ½ in. from end of **A**.



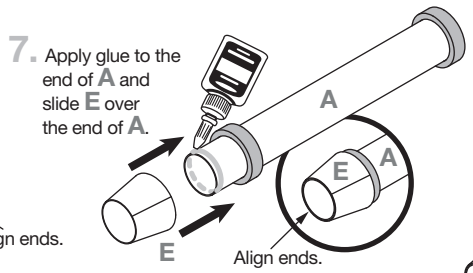
5. Apply glue just past the pencil mark on **A** and on the opposite end of **A**.



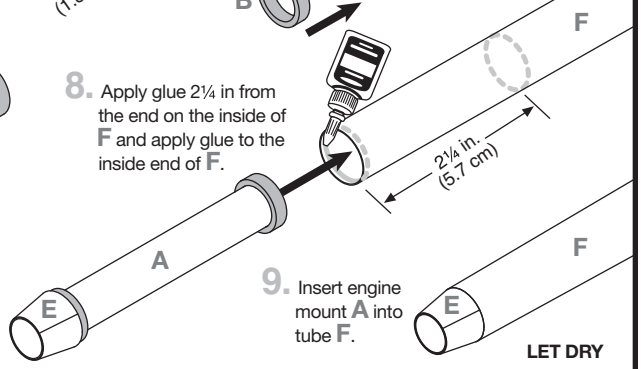
6. Slide both **B** parts into place as shown below.



7. Apply glue to the end of **A** and slide **E** over the end of **A**.



8. Apply glue 2¼ in from the end on the inside of **F** and apply glue to the inside end of **F**.

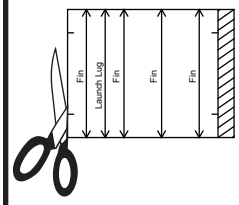


9. Insert engine mount **A** into tube **F**.

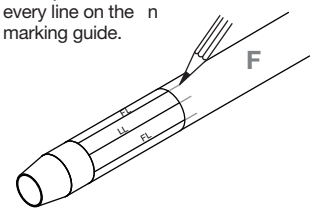
LET DRY

FIN INSTALLATION

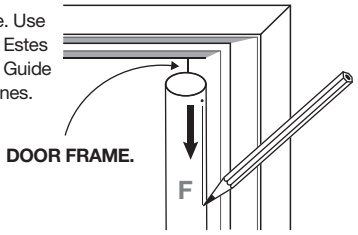
1. Cut out the full size n marking guide on page 3.



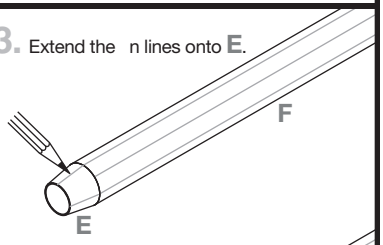
2. Wrap the n marking guide around tube **F** and secure it with clear tape. Make pencil marks on tube **F** for every line on the n marking guide.



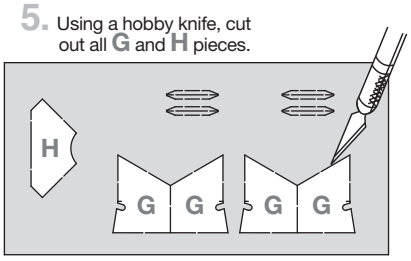
3. Remove guide. Use door frame or Estes Tube Marking Guide to extend all lines.



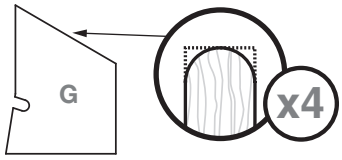
3. Extend the n lines onto **E**.



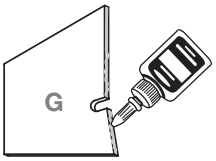
5. Using a hobby knife, cut out all **G** and **H** pieces.



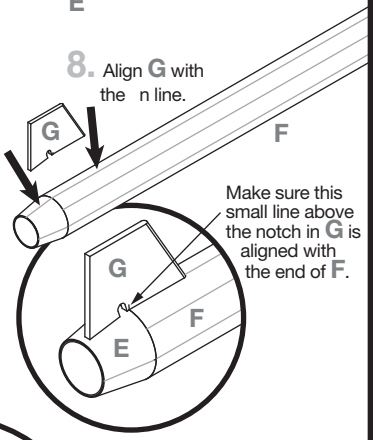
6. Round the leading edge of all the ns **G**.



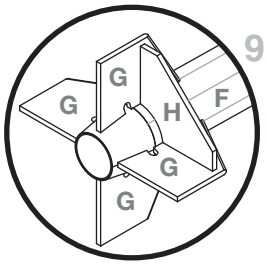
7. Apply glue to the inside edge of **G**.



8. Align **G** with the n line.

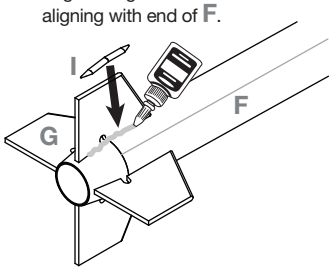


9. Repeat for all four ns, using **H** to assist with alignment and spacing.

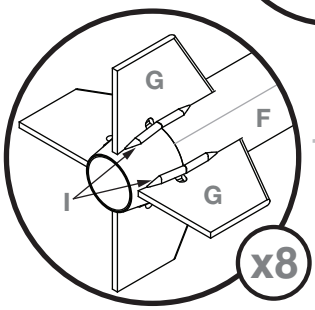


LET DRY

10. Apply glue along the n seam. Place **I** along n with rounded edge facing out and with bend aligning with end of **F**.



11. Repeat for both sides of every n.



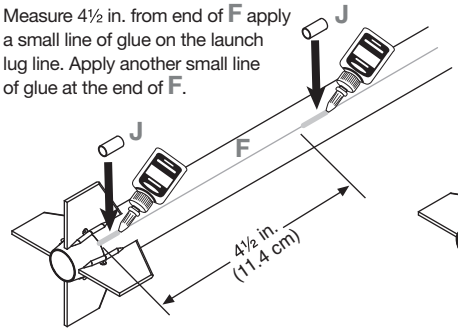
LET DRY

NOTE:

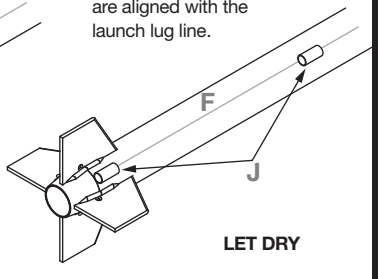
Use n alignment guide on page 3 to ensure proper n alignment.

LAUNCH LUG ATTACHMENT

1. Measure 4½ in. from end of **F** apply a small line of glue on the launch lug line. Apply another small line of glue at the end of **F**.



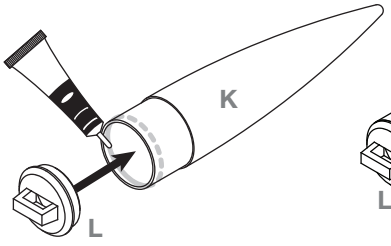
2. Place launch lugs **J** 4½ in. from the end of **F**. Place the other at the end of **F**. Be sure both are aligned with the launch lug line.



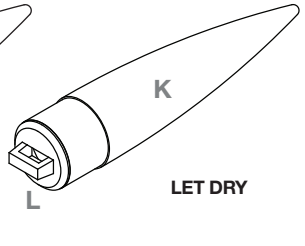
LET DRY

ASSEMBLE NOSE CONE

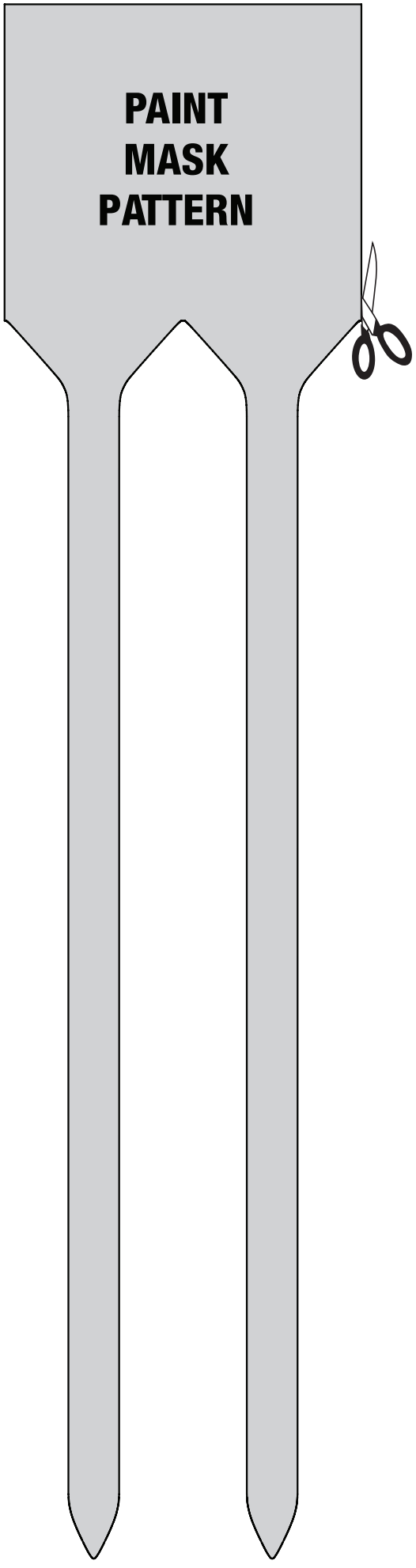
1. Apply plastic glue to the end on the inside of **K**.

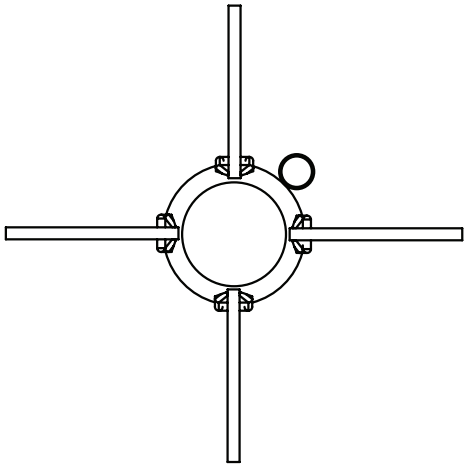


2. Insert **L** into **K**.

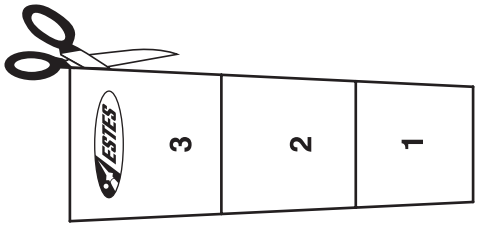


LET DRY

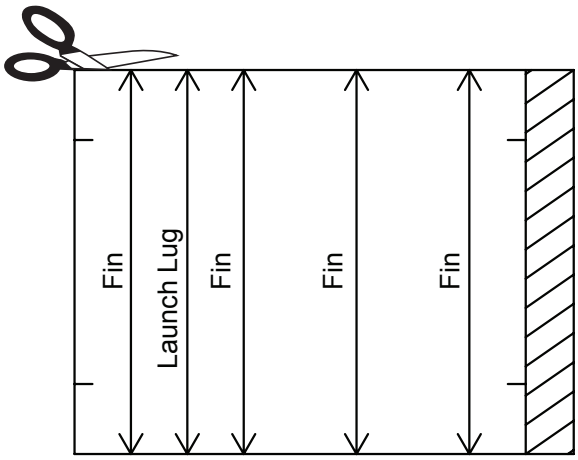




FIN ALIGNMENT GUIDE



SHOCK CORD ANCHOR



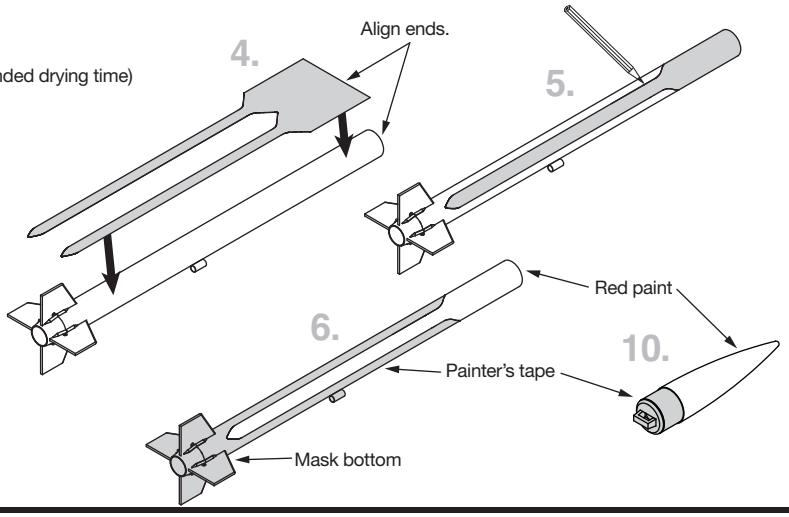
FULL SIZE FIN MARKING GUIDE

PAINTING & DECAL

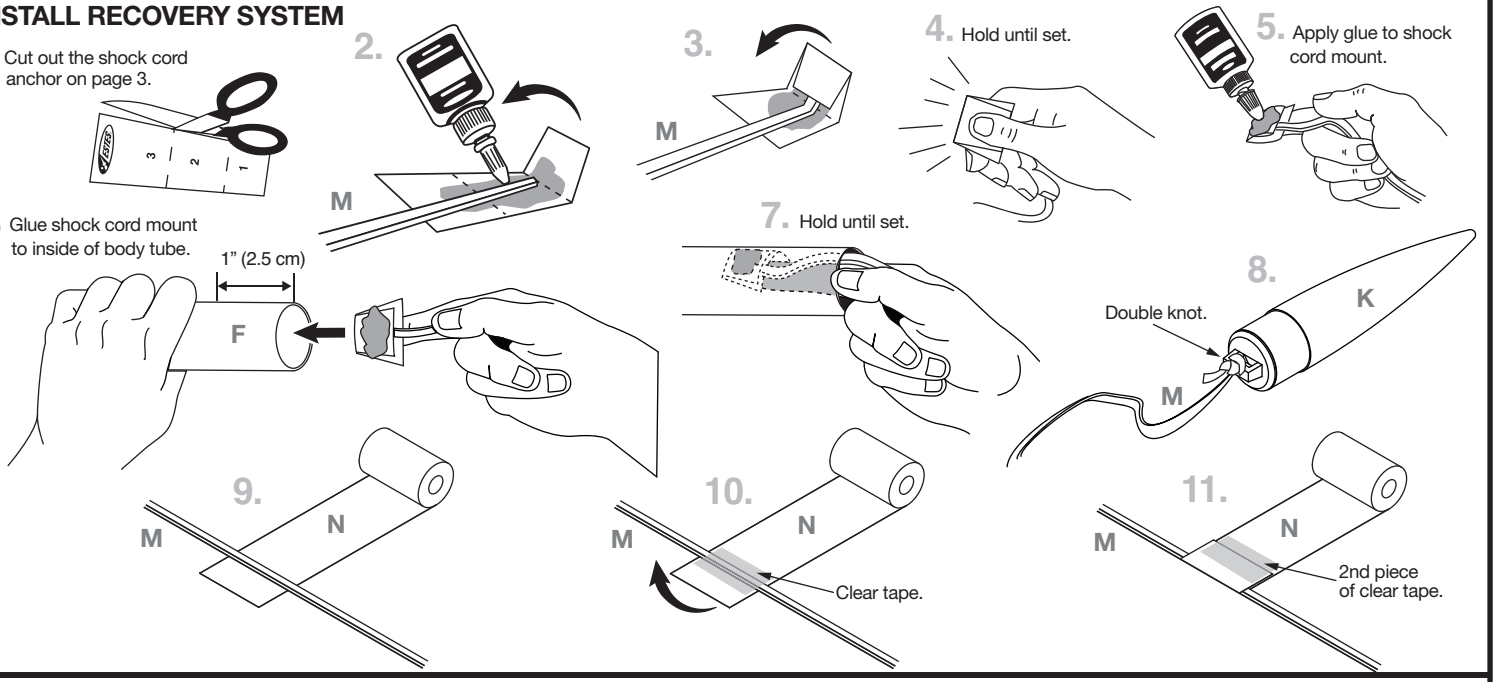
1. Spray rocket with white primer, let dry, and sand. Repeat until rocket is smooth.
2. Spray entire rocket with white paint and let dry. (Follow paint manufactures recommended drying time)
3. Cut out paint mask pattern.
4. Wrap paint mask around tube and tape upper portion together.
5. Trace around mask edge lightly with a pencil.
6. Remove mask.
7. Use painter's tape to mask the outside perimeter of pencil line.
8. Completely mask off the rest of the bottom of the rocket.
9. Spray unmasked part of rocket with red paint and let dry.
10. Mask bottom shoulder of nose cone with painter's tape.
11. Spray nose cone with red paint and let dry.
12. Apply decals.

⚠ CAUTION:
See manufacturer's warnings and instructions before using spray nishing products.

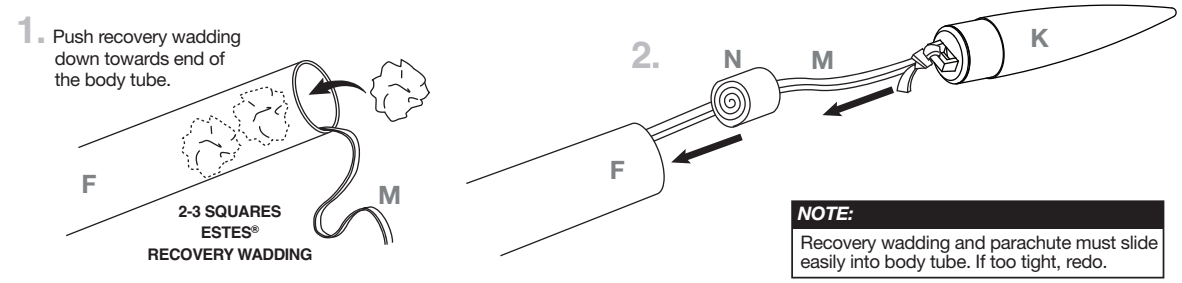
NOTE:
Please refer to packaging for suggested paint scheme and/or decal placement.



INSTALL RECOVERY SYSTEM

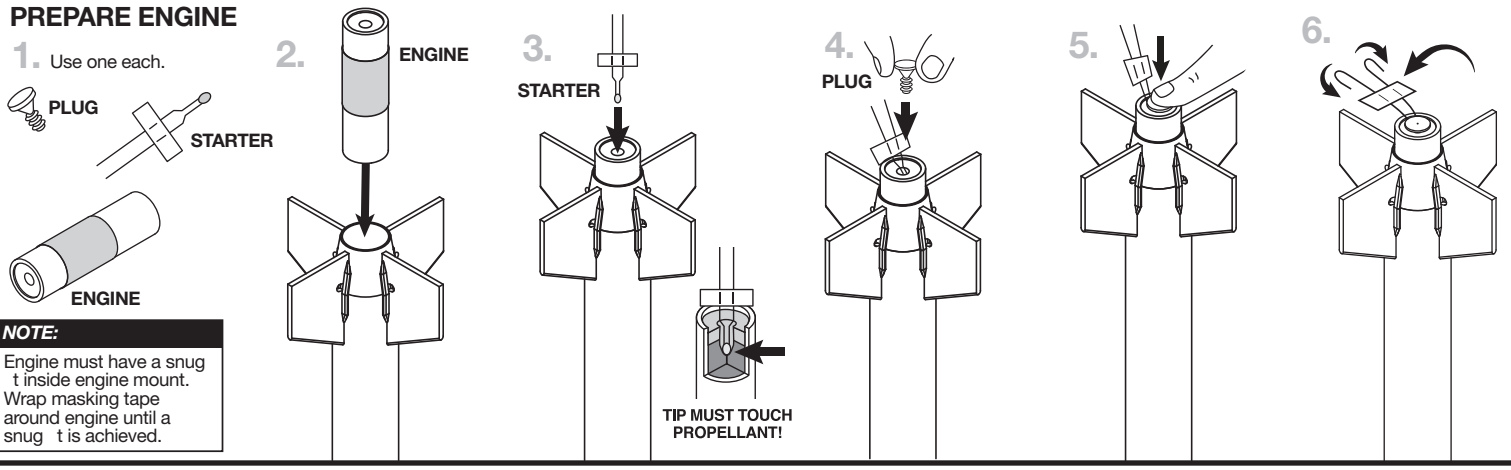


PREPARE FLIGHT RECOVERY

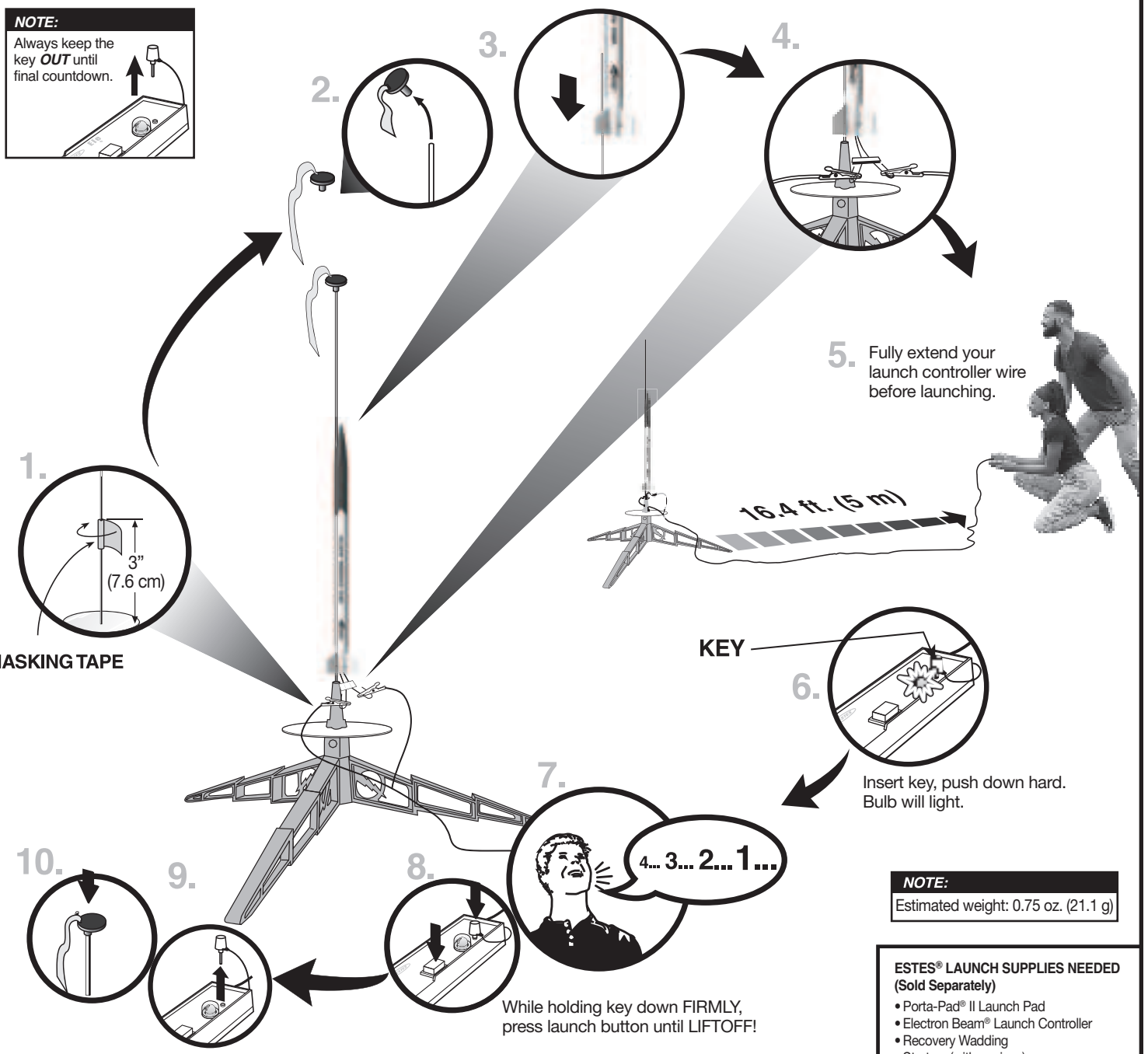


NOTE:
Recovery wadding and parachute must slide easily into body tube. If too tight, redo.

PREPARE ENGINE



NOTE:
Engine must have a snug t inside engine mount. Wrap masking tape around engine until a snug t is achieved.



NOTE:
Estimated weight: 0.75 oz. (21.1 g)

ESTES® LAUNCH SUPPLIES NEEDED (Sold Separately)

- Porta-Pad® II Launch Pad
- Electron Beam® Launch Controller
- Recovery Wadding
- Starters (with engines)
- Plugs (with engines)
- Estes® Engines: A3-4T (rst ight), ½A3-2T, A3-6T, A10-3T

PRECAUTIONS

NAR SAFETY CODE

NO DRY GRASS OR WEEDS

PRE-LAUNCH CHECK For safety, never launch a damaged rocket. Check the rocket's body, nose cone and ns. Also, check the engine mount, recovery system and launch lug(s). Repair any damage before launching the rocket.

FLYING YOUR ROCKET Choose a large eld (500 ft. [152 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Launch only with little or no wind and good visibility. Always follow the National Association of Rocketry (NAR) SAFETY CODE (enclosed).

MISFIRES TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET. Disconnect the micro-clips and remove the engine. Take the plug and starter out of the engine. A burned starter means the starter tip was not touching engine propellant. Install a new starter; be sure the tip is touching propellant inside the engine. Push the plug in place. Repeat steps under Countdown and Launch.

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